

(074-E&E-02-02) ELECTRONICS AND COMPUTER ENGINEERING

Significance of the Program

From embedded systems used in smart systems including automobiles to using Computer based systems with Artificial Intelligence, Electronics & Computer Engineering knowledge plays a crucial role. The two major disciplines of “Electronics” and “Computer” are interwoven that focusses on electronics hardware circuits, programming and IT aspects to make the students industry ready. This cross-discipline study gives the advantage of becoming a multi-skilled professional Engineer with knowledge gained in both computing and electronics domains.

Career Options

Electronics and Computer Engineering course offers depth in a wide range of courses that will open doors to many opportunities:

- As electronics design engineer for design of electronic systems.
- As network engineer for maintaining and troubleshooting computer networks.
- As data analyst / software engineer to develop software solutions.
- As web designer in wide range of industries.

Some of the major companies where the students can get placed but not limited to are Cisco, Oracle, Toshiba, Schneider Electric, Intel, Deloitte, MU Sigma, Cybage, Saankhya Labs, Microsoft, Unisys Global, Philips, IBM, S&P Capital IQ, Ericsson Global, TATA ELXSI, Samsung R&D, Freescale, L&T IES, Philips Electronics, etc.

Program Objectives

- Able to understand both hardware and software aspects in detail as required by the industry.
- To create engineers capable of solving real-world problems which require computation, communication, or control by utilizing the most efficient combination of hardware and software.
- To learn how to build optimal machines using knowledge gained in both computing and electronics domains.

Outcomes of the Program

At the end of the course, the students will be able to

- Acquire knowledge and skills to analyse, design and develop electronic devices and systems.

- Apply cutting-edge electronics and computer engineering tools and modern techniques and find solutions for interdisciplinary problems.
- Demonstrate expertise in integration of hardware and software for prototype development.
- Develop new technologies, both hardware and software aspects for applications such as healthcare, security, communication, early disaster warning, education, entertainment, business, production, farming, etc.

Major Course Outline

1. Electronic circuits
2. Data structures
3. Web design and development
4. Computer architecture
5. Digital systems design
6. Data Science and Big Data Analytics
7. Machine learning and Artificial Intelligence
8. VLSI and Embedded System Design
9. Internet of things and Network Security
10. Electronics Hardware Design